

Claims

1. A method to visualize a fluorescent protein through the skin of an intact subject, which method comprises applying excitation light to said subject using a portable light source with an attached first filter and observing emission from said protein through a second filter.
2. The method of claim 1, wherein the portable light source is an LED flashlight.
3. The method of claim 1 or 2, wherein the second filter is provided as a goggle.
4. The method of any of claims 1-3, wherein said fluorescent protein is expressed in tumor cells.
5. The method of claim 4, wherein said tumor cells are orthotopically implanted in an immunocompromised or syngeneic animal.
6. The method of any of claims 1-3, wherein the fluorescent protein is expressed by an infectious agent.
7. The method of any of claims 1-3, wherein the fluorescent protein is operatively linked to the control system for a gene whose expression is to be studied.
8. The method of any of claims 1-3, wherein observation is made of more than one fluorescent protein.
9. A method for monitoring tumor growth in an intact subject comprising:  
applying excitation light using a portable excitation source with a first filter to a subject comprising tumor cells labeled with fluorescent protein; and  
observing the location(s) of said tumor cells in the intact subject using a second filter.
10. The method of claim 9, wherein said applying of excitation light and observing are conducted as a function of time.

11. The method of claim 9 or 10, which further comprises treating said subject with a candidate protocol and comparing the location(s) of tumor cells in said subject treated with the protocol with the location(s) of tumor cells in a subject not treated with the protocol.

12. A method for monitoring gene expression in an intact subject which method comprises

applying an excitation light from a portable excitation source with a first filter to a subject comprising a nucleotide sequence encoding a fluorescent protein operably linked to control sequences associated with a gene whose expression is to be monitored and

observing the presence or amount of fluorescent protein in the intact subject using a second filter.

13. The method of claim 12, wherein said applying of excitation light and observing are conducted as a function of time.

14. The method of claim 12 or 13, which further comprises providing a stimulus to said subject and comparing the level of fluorescence emitted by the subject provided the stimulus to that emitted by a subject not provided with said stimulus.

15. A method to monitor the progress of infection in a subject which method comprises

applying excitation light using a portable excitation source with a first filter to a subject comprising an infectious agent labeled with fluorescent protein, and

observing the location(s) of said infectious agent in the intact subject using a second filter.

16. The method of claim 15, wherein said applying of excitation light and observing are conducted as a function of time.

17. The method of claim 15 or 16, which further comprises treating said subject with a candidate protocol and comparing the location(s) of infectious agent in said subject treated with said protocol with the location(s) of infectious agent in a subject not treated with the protocol.